

## ERICA FLEISHMAN

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### Education

B.S., Biological Sciences. Stanford University, 1991.  
M.S., Biological Sciences. Stanford University, 1992.  
Ph.D., Ecology, Evolution, and Conservation Biology. University of Nevada, Reno, 1997.

### Professional experience

1988 – 1993 Research Assistant. Center for Conservation Biology, Stanford University.  
1992 – 1993 Research Assistant. Professor Marcus Feldman, Stanford University.  
1992 – 1993 Teaching Assistant. Department of Biological Sciences, Stanford University.  
1993 – 1997 Research Assistant. Department of Biology, University of Nevada, Reno.  
1994 Teaching Assistant. Department of Biology, University of Nevada, Reno.  
1997 – 2000 Postdoctoral Fellow. Center for Conservation Biology, Stanford University.  
2000 – 2005 Research Associate. Center for Conservation Biology, Stanford University.  
2005 – 2006 Senior Research Scientist. Center for Conservation Biology, Stanford University.  
2006 – 2009 Founding director, Conservation and Resource Management Program. National Center for Ecological Analysis and Synthesis, University of California, Santa Barbara.  
2009 – Researcher. Bren School of Environmental Science & Management, University of California, Santa Barbara.

### Professional service and activities

1990 – 1991 Jasper Ridge Biological Preserve Policy Committee, Stanford University  
1993 – 1995 Founding Editor, *Nevada Biodiversity Initiative Newsletter*  
1994 – 1997 Undergraduate Studies Committee, Department of Biology, University of Nevada, Reno  
1994 – 2009 Founding Editor, *Society for Conservation Biology Newsletter*  
1995 – 1996 President, Ecology, Evolution, and Conservation Biology graduate student organization, University of Nevada, Reno  
1995 – 1997 Technical Editor and volume layout. Reed, J.M., N. Warnock, and L.W. Oring, editors. 1997. Conservation and management of shorebirds in the western Great Basin of North America. *International Wader Studies* 9.  
1995 – 1997 Founding Editor, *Newsletter of the Great Basin Chapter of the Society for Conservation Biology*

- 1997 – 2006 Coordinating Committee, Nevada Biodiversity Initiative  
1999 Scientific Review Panel, Terrestrial indicators of ecological integrity, U.S. Environmental Protection Agency
- 1999 – 2000 Coordinator, second annual San Francisco Bay Area Conservation Biology Symposium, Stanford University
- 1999 – 2000 Assistant Editor, *Association for Women in Science Magazine*
- 1999 – Board of Governors, Society for Conservation Biology
- 2001, 2005 Human Biology Honors Committee (ad hoc member), Stanford University
- 2001 – 2002 Ad hoc Assigning Editor, *Conservation Biology*
- 2001 – 2002 Invited Faculty Leader, graduate research training course on biocomplexity and ecoinformatics, National Center for Ecological Analysis and Synthesis
- 2001 – 2002 Scientific Review Panel, Evaluating potential methods for prioritizing species for listing actions under the Endangered Species Act, U.S. Fish and Wildlife Service
- 2002 – 2003 Science Advisory Panel, Competition to select a forest and biodiversity conservation focus site, Doris Duke Charitable Foundation
- 2002 – 2004 Facilitator, Science Advisory Panel, East Contra Costa County, California Habitat Conservation Plan / Natural Community Conservation Plan
- 2002 – 2009 Board of Editors, *Conservation Biology*
- 2003 Committee on National Forest Planning and Management, North America Section, Society for Conservation Biology
- 2003 Consulting Scientist, Wildlife Conservation Society / Foundations of Success. Development of a monitoring and evaluation system and learning network for conservation projects supported by the Doris Duke Charitable Foundation.
- 2003 – 2006 Coordinator, Great Basin Invasive Species and Remote Sensing Network
- 2004 Advisor, Carson wandering skipper recovery plan, U.S. Fish and Wildlife Service
- 2004 Invited participant, workshop on generalized regression analyses and spatial predictions, Riederalp, Switzerland
- 2004 – 2005 Reviewer, proposed butterfly monitoring program for the San Bruno Mountain Habitat Conservation Plan, U.S. Fish and Wildlife Service
- 2004 – 2006 Chair, Steering Committee, 2006 Society for Conservation Biology Annual Meeting
- 2004 – DeWind Award Committee, Xerces Society
- 2005, 2008, 2009 External Examiner, Doctor of Philosophy Thesis, The University of Queensland, Australia
- 2005 Consulting Scientist, Wildlife Conservation Society / Foundations of Success. Strengthening capacity to generate, disseminate and adopt good practices for biodiversity conservation.
- 2005 Consulting Scientist, Wildlife Conservation Society / Foundations of Success. Evaluation of the David and Lucile Packard Foundation's Western Pacific program.
- 2005 – Scientific Consultant, Santa Clara Valley, California Habitat Conservation Plan / Natural Community Conservation Plan
- 2005 – Scientific Review Panel, Imperial Irrigation District, California Habitat Conservation Plan / Natural Community Conservation Plan
- 2005 – Associate Editor, *Global Ecology and Biogeography*

- 2006 Consulting Scientist, Wildlife Conservation Society / Foundations of Success. Evaluation of relationships between conservation science and the work of conservation funders.
- 2006 External Examiner, Doctor of Philosophy Thesis, University of Cape Town, South Africa
- 2006 – 2008 President Elect, North America Section, Society for Conservation Biology
- 2007 Organizer (with J.C. Chambers and M. Wisdom). “Alternative futures for Great Basin ecosystems.” Organized oral session. Joint meeting of the Ecological Society of America and Society for Ecological Restoration, San Jose, California.
- 2007 Science Advisor, California Bay–Delta Conservation Plan
- 2007 – 2009 Associate Editor, *Insect Conservation and Diversity*
- 2008 Invited participant, Global assessment of 100 questions of greatest importance to conservation policy makers and practitioners, Cambridge, United Kingdom
- 2008 – 2009 President, North America Section, Society for Conservation Biology
- 2008 – Board of Directors, The Conservation Planning Institute, Corvallis, Oregon
- 2008 – Science Advisory Board, National Center for Conservation Science and Policy, Ashland, Oregon
- 2009 Invited participant, Horizon scan of environmental issues 2009, Cambridge, United Kingdom
- 2009 – 2010 Steering Committee, “Conservation social science in Canada: assessing and prioritizing research directions for an emerging discipline” (Murray Rudd, Principal Investigator.) Supported by the Social Science and Humanities Research Council of Canada.
- 2009 – Subject Editor, *Ecography*
- 2009 – Management Board, Dryad data repository
- 2009 – Advisory Group, Collaboration for Environmental Evidence
- 2010 – Editor in Chief, *Conservation Biology*

### Peer-reviewed publications

- Fleishman, E., J.F. Baughman, A.E. Launer, and P.R. Ehrlich. 1993. The effect of fluorescent pigments on butterfly copulation. *Ecological Entomology* 18:165–167.
- Fleishman, E., G.T. Austin, and D.D. Murphy. 1997. Natural history and biogeography of the butterflies of the Toiyabe Range, Nevada (Lepidoptera: Papilionoidea). *Holarctic Lepidoptera* 4:1–18.
- Fleishman, E., A.E. Launer, S.B. Weiss, J.M. Reed, C.L. Boggs, D.D. Murphy, and P.R. Ehrlich. 1997 (2000). Effects of microclimate and oviposition timing on prediapause larval survival of the Bay checkerspot butterfly, *Euphydryas editha bayensis* (Lepidoptera: Nymphalidae). *Journal of Research on the Lepidoptera* 36:31–44.
- Fleishman, E., G.T. Austin, and A.D. Weiss. 1998. An empirical test of Rapoport’s rule: elevational gradients in montane butterfly communities. *Ecology* 79:2482–2493.
- Fleishman, E., G.T. Austin, P.F. Brussard, and D.D. Murphy. 1999. A comparison of butterfly communities in native and agricultural riparian habitats in the Great Basin. *Biological Conservation* 89:209–218.
- Fleishman, E. and D.D. Murphy. 1999. Patterns and processes of nestedness in a Great Basin butterfly community. *Oecologia* 119:133–139.

- Fleishman, E., D.D. Murphy, and G.T. Austin. 1999. Butterflies of the Toquima Range, Nevada: distribution, natural history, and comparison to the Toiyabe Range. *Great Basin Naturalist* 59:50–62.
- Fleishman, E., G.H. Wolff, C.L. Boggs, P.R. Ehrlich, A.E. Launer, J.O. Niles, and T.H. Ricketts. 1999. Conservation in practice: overcoming obstacles to implementation. *Conservation Biology* 13:450–452.
- Fleishman, E. 2000. Monitoring the response of butterfly communities to prescribed fire. *Environmental Management* 26:685–695.
- Fleishman, E., J.P. Fay, and D.D. Murphy. 2000. Upsides and downsides: contrasting topographic gradients in species richness and associated scenarios for climate change. *Journal of Biogeography* 27:1209–1219.
- Fleishman, E., B.G. Jonsson, and P. Sjögren-Gulve. 2000. Focal species modeling for biodiversity conservation. In P. Sjögren-Gulve and T. Ebenhard, editors. *The use of population viability analyses in conservation planning*. *Ecological Bulletins* 48:85–99.
- Fleishman, E., D.D. Murphy, and P.F. Brussard. 2000. A new method for selection of umbrella species for conservation planning. *Ecological Applications* 10:569–579.
- Fleishman, E., G.T. Austin, and D.D. Murphy. 2001. Biogeography of Great Basin butterflies: revisiting patterns, paradigms, and climate change scenarios. *Biological Journal of the Linnean Society* 74:501–515.
- Fleishman, E., R.B. Blair, and D.D. Murphy. 2001. Empirical validation of a method for umbrella species selection. *Ecological Applications* 11:1489–1501.
- Fleishman, E., A.E. Launer, K.R. Switky, U. Yandell, J. Heywood, and D.D. Murphy. 2001. Rules and exceptions in conservation genetics: genetic assessment of the endangered plant *Cordylanthus palmatus* and its implications for management planning. *Biological Conservation* 98:45–53.
- Fleishman, E., R. Mac Nally, J.P. Fay, and D.D. Murphy. 2001. Modeling and predicting species occurrence using broad-scale environmental variables: an example with butterflies of the Great Basin. *Conservation Biology* 15:1674–1685.
- Fleishman, E., C.J. Betrus, R.B. Blair, R. Mac Nally, and D.D. Murphy. 2002. Nestedness analysis and conservation planning: the importance of place, environment, and life history across taxonomic groups. *Oecologia* 133:78–89.
- Fleishman, E. and R. Mac Nally. 2002. Topographic determinants of faunal nestedness in Great Basin butterfly assemblages. *Conservation Biology* 16:422–429.
- Fleishman, E. and R. Mac Nally. 2002–2003 (2004). Linking models of species occurrence and landscape reconstruction. *Transactions of the Western Section of the Wildlife Society* 38/39:1–4.
- Fleishman, E., D.D. Murphy, T. Floyd, N. McDonal, and J. Walters. 2002. Characterization of riparian bird communities in a Mojave Desert watershed. *Great Basin Birds* 5:38–44.
- Fleishman, E., D.D. Murphy, and P. Sjögren-Gulve. 2002. Modeling species richness and habitat suitability for species of conservation interest. Pages 507–517 in J.M. Scott, P.J. Heglund, M. Morrison, M. Raphael, J. Haufler, and B. Wall, editors. *Predicting species occurrences: issues of scale and accuracy*. Island Press, Covello, California.
- Fleishman, E., C. Ray, P. Sjögren-Gulve, C.L. Boggs, and D.D. Murphy. 2002. Assessing the relative roles of patch quality, area, and isolation in predicting metapopulation dynamics. *Conservation Biology* 16:706–716.

- Mac Nally, R. and E. Fleishman. 2002. Using 'indicator' species to model species richness: model development and predictions. *Ecological Applications* 12:79–92.
- Austin, G.T., D.D. Murphy, J.F. Baughman, A.E. Launer, and E. Fleishman. 2003. Hybridization of checkerspot butterflies in the Great Basin. *Journal of the Lepidopterists' Society* 57:176–192.
- Britten, H.B., E. Fleishman, G.T. Austin, and D.D. Murphy. 2003. Genetically effective and adult census population sizes in the Apache silverspot butterfly, *Speyeria nokomis apacheana* (Lepidoptera: Nymphalidae). *Western North American Naturalist* 63:229–235.
- Fleishman, E., C.J. Betrus, and R.B. Blair. 2003. Effects of spatial scale and taxonomic group on partitioning of butterfly and bird diversity in the Great Basin. *Landscape Ecology* 18:675–685.
- Fleishman, E., C.J. Betrus, and L.P. Bulluck. 2003. Annual variability of species richness and composition of breeding birds in the central Great Basin. *Great Basin Birds* 6(1):36–44.
- Fleishman, E. and R. Mac Nally. 2003. Distinguishing between signal and noise in faunal responses to environmental change. *Global Ecology and Biogeography* 12:395–402.
- Fleishman, E., R. Mac Nally, and J.P. Fay. 2003. Validation tests of predictive models of butterfly occurrence based on environmental variables. *Conservation Biology* 17:806–817.
- Fleishman, E., N. McDonal, R. Mac Nally, D.D. Murphy, J. Walters, and T. Floyd. 2003. Effects of floristics, physiognomy, and non-native vegetation on riparian bird communities in a Mojave Desert watershed. *Journal of Animal Ecology* 72:484–490.
- Mac Nally, R., E. Fleishman, J.P. Fay, and D.D. Murphy. 2003. Modeling butterfly species richness using mesoscale environmental variables: model construction and validation. *Biological Conservation* 110:21–31.
- Baber, M.J., E. Fleishman, K.J. Babbitt, and T.L. Tarr. 2004. The relationship between wetland hydroperiod and nestedness patterns in assemblages of larval amphibians and predatory macroinvertebrates. *Oikos* 107:16–27.
- Bailey, S-A., S. Anderson, K. Carney, E. Cleland, M.C. Horner-Devine, G. Luck, L.A. Moore, C. Betrus, and E. Fleishman. 2004. Primary productivity and species richness: relationships among functional guilds, residency groups and vagility classes at multiple spatial scales. *Ecography* 27:207–217.
- Fleishman, E., J.B. Dunham, P.F. Brussard, and D.D. Murphy. 2004. Explanation, prediction, and maintenance of native species richness and composition in the central Great Basin. Pages 232–260 in J.C. Chambers and J.R. Miller, editors. *Great Basin riparian ecosystems—ecology, management, and restoration*. Island Press, Washington, D.C.
- Fleishman, E., R. Mac Nally, and J.R. Thomson. 2004 (2005). Challenges and opportunities for conserving faunal biodiversity in arid ecosystems. Invited paper. *Annals of Arid Zone* 43:427–444.
- Mac Nally, R. and E. Fleishman. 2004. A successful predictive model of species richness based on indicator species. *Conservation Biology* 18:646–634.
- Mac Nally, R., E. Fleishman, L. Bulluck, and C. Betrus. 2004. Comparative influence of spatial scale on beta diversity within regional assemblages of birds and butterflies. *Journal of Biogeography* 31:917–929.

- Mac Nally, R., E. Fleishman, and D.D. Murphy. 2004. Influence of temporal scale of sampling on detection of relationships between invasive plants and the diversity patterns of plants and butterflies. *Conservation Biology* 18:1525–1532.
- Seto, K.C., E. Fleishman, J.P. Fay, and C.J. Betrus. 2004. Linking spatial patterns of butterfly and bird species richness with Landsat TM derived NDVI. *International Journal of Remote Sensing* 25:4309–4324.
- Betrus, C.J., E. Fleishman, and R.B. Blair. 2005. Cross-taxonomic potential and spatial transferability of an umbrella species index. *Journal of Environmental Management* 74:79–87.
- Fleishman, E. 2005. Identification and conservation application of signal, noise, and taxonomic effects in diversity patterns. Invited paper. *Animal Biodiversity and Conservation* 28:45–58.
- Fleishman, E., R. Mac Nally, and D.D. Murphy. 2005. Relationships among non-native plants, diversity of plants and butterflies, and adequacy of spatial sampling. *Biological Journal of the Linnean Society* 85:157–166.
- Fleishman, E., D.D. Murphy, and G.T. Austin. 2005. Biodiversity patterns of spring-associated butterflies in a Mojave Desert mountain range. *Journal of the Lepidopterists' Society* 59:89–95.
- Fleishman, E., J.R. Thomson, R. Mac Nally, D.D. Murphy, and J.P. Fay. 2005. Using indicator species to predict species richness of multiple taxonomic groups. *Conservation Biology* 19:1125–1137.
- Sada, D.W., E. Fleishman, and D.D. Murphy. 2005. Response of spring-dependent aquatic assemblages to environmental and land use gradients in a Mojave Desert mountain range. *Diversity and Distributions* 11:91–99.
- Thomson, J.R., E. Fleishman, R. Mac Nally, and D.S. Dobkin. 2005. Influence of the temporal resolution of data on the success of indicator species models of species richness across multiple taxonomic groups. *Biological Conservation* 124:503–518.
- Bulluck, L.P., E. Fleishman, C.J. Betrus, and R.B. Blair. 2006. Spatial and temporal variation in species occurrence rate affects the accuracy of occurrence models. *Global Ecology and Biogeography* 15:27–38.
- Fleishman, E. and R. Mac Nally. 2006. Patterns of spatial autocorrelation of assemblages of birds, floristics, physiognomy, and primary productivity in the central Great Basin, USA. *Diversity and Distributions* 12:236–243.
- Fleishman, E., D.D. Murphy, and D.W. Sada. 2006. Effects of environmental heterogeneity and disturbance on the native and non-native flora of desert springs. *Biological Invasions* 8:1091–1101.
- Fleishman, E., R.F. Noss, and B.R. Noon. 2006. Utility and limitations of species richness metrics for conservation planning. *Ecological Indicators* 6:543–553.
- Thomson, J.R., E. Fleishman, R. Mac Nally, and D.S. Dobkin. 2006. Comparison of predictor sets for species richness and the number of rare species of butterflies and birds. *Journal of Biogeography* 34:90–101.
- Fleishman, E. and D.S. Dobkin. 2007. Response of avian species richness to elevation in the central Great Basin. *Great Basin Birds* 9:8–20.
- Fleishman, E., R. Donnelly, J.P. Fay, and R. Reeves. 2007. Applications of nestedness analyses to biodiversity conservation in developing landscapes. *Landscape and Urban Planning* 18:271–281.

- Fleishman, E. and R. Mac Nally. 2007. Measuring the response of animals to contemporary drivers of fragmentation. Invited paper. *Canadian Journal of Zoology* 85:1080–1090.
- Pellet, J., E. Fleishman, D.S. Dobkin, A. Gander, and D.D. Murphy. 2007. An empirical evaluation of the area and isolation paradigm of metapopulation dynamics. *Biological Conservation* 136:483–495.
- Talley, T.S., E. Fleishman, M. Holyoak, D.D. Murphy, and A. Ballard. 2007. Rethinking a rare-species conservation strategy in an urbanizing landscape: the case of the valley elderberry longhorn beetle. *Biological Conservation* 135:21–32.
- Thomson, J.R., R. Mac Nally, E. Fleishman, and G. Horrocks. 2007. Predicting bird species distributions in reconstructed landscapes. *Conservation Biology* 21:752–766.
- Bradley, B.A. and E. Fleishman. 2008. Can remote sensing improve species distribution modelling? Commentary. *Journal of Biogeography* 35:1158–1159.
- Bradley, B. and E. Fleishman. 2008. Relationships between expanding pinyon–juniper cover and topography in the central Great Basin, Nevada. *Journal of Biogeography* 35:951–964.
- Drake, J.M., E.E. Cleland, M.C. Horner-Devine, E. Fleishman, C. Bowles, M.D. Smith, K. Carney, S. Emery, J. Gramling, D.B. Vandermast, and J.B. Grace. 2008. Do non-native plant species affect the shape of productivity–diversity relationships? *American Midland Naturalist* 159:55–66.
- Mac Nally, R., E. Fleishman, J.R. Thomson, and D.S. Dobkin. 2008. Use of guilds for modeling avian responses to vegetation in the Intermountain West (U.S.A.). *Global Ecology and Biogeography* 17:758–769.
- Schindler, D.E., X. Augerot, E. Fleishman, N.J. Mantua, B. Riddell, M. Ruckelshaus, J. Seeb, and M. Webster. 2008. Climate change, ecosystem impacts, and management for Pacific salmon. *Fisheries* 33:502–506.
- Zavaleta, E., D.C. Miller, N. Salafsky, E. Fleishman, M. Webster, B. Gold, D. Hulse, M. Rowen, G. Tabor, and J. Vanderryn. 2008. Enhancing the engagement of U.S. private foundations with conservation science. *Conservation Biology* 22:1477–1484.
- Baron, J.S., L. Gunderson, C.D. Allen, E. Fleishman, D. McKenzie, L. Meyerson, J. Oropeza, and N. Stephenson. 2009. Options for National Parks and Reserves for adapting to climate change. *Environmental Management*. Published online 16 May 2009. DOI: 10.1007/s00267-009-9296-6
- Bini, L.M., J.A.F. Diniz-Filho, T.F.L.V.B. Rangel, T.S.B. Akre, R.G. Albaladejo, F.S. Albuquerque, A. Aparicio, M.B. Araújo, A. Baselga, J. Beck, M.I. Bellocq, K. Böhning-Gaese, P.A.V. Borges, I. Castro-Parga, V.K. Chey, S.L. Chown, P. de Marco, Jr., D.S. Dobkin, D. Ferrer-Castán, R. Field, J. Filloy, E. Fleishman, J.F. Gómez, J. Hortal, J.B. Iverson, J.T. Kerr, W.D. Kissling, I.J. Kitching, J.L. León-Cortés, J.M. Lobo, D. Montoya, I. Morales-Castilla, J.C. Moreno, T. Oberdorff, M.Á. Olalla-Tárraga, J.G. Pausas, H. Qian, C. Rahbek, M.Á. Rodríguez, M. Rueda, Adriana Ruggiero, Paula Sackmann, N.J. Sanders, L.C. Terribile, O.R. Vetaas, and B.A. Hawkins. 2009. Parameter estimation in geographical ecology: an empirical evaluation of spatial and non-spatial regression. *Ecography* 32:193–204.
- Dickson, B.G., E. Fleishman, D.S. Dobkin, and S.R. Hurteau. 2009. Relationship between avifaunal occupancy and riparian vegetation in the central Great Basin (Nevada, U.S.A.). *Restoration Ecology* 17:722–730.

- Fleishman, E. and D.S. Dobkin. 2009. Current and potential future elevational distributions of birds associated with pinyon–juniper woodlands in the central Great Basin, U.S.A. *Restoration Ecology* 17:731–739.
- Fleishman, E. and D.D. Murphy. 2009. A realistic assessment of the indicator potential of butterflies and other charismatic taxonomic groups. *Conservation Biology* 23:1109–1116.
- Noss, R.F., E. Fleishman, D.A. DellaSala, J.M. Fitzgerald, M. Gross, M.B. Main, F. Nagle, S.L. O’Malley, and J. Rosales. 2009. Priorities for improving the scientific foundation of conservation policy in North America. *Conservation Biology* 23:825–833.
- Sutherland, W.J., W.M. Adams, R.B. Aronson, R. Aveling, T.M. Blackburn, S. Broad, G. Ceballos, I.M. Côté, R.M. Cowling, G.A.B. da Fonseca, E. Dinerstein, P.J. Ferraro, E. Fleishman, C. Gascon, M. Hunter, Jr., J. Hutton, P. Kareiva, A. Kuria, D.W. Macdonald, K. Mackinnon, F.J. Madgwick, M.B. Mascia, J. McNeely, E.J. Milner-Gulland, S. Moon, C.G. Morley, S. Nelson, D. Osborn, M. Pai, E.C.M. Parsons, L.S. Peck, H. Possingham, S.V. Prior, A.S. Pullin, M.R.W. Rands, J. Ranganathan, K.H. Redford, J.P. Rodriguez, F. Seymour, J. Sobel, N.S. Sodhi, A. Stott, K. Vance-Borland, and A.R. Watkinson. 2009. One hundred questions of importance to the conservation of global biological diversity. *Conservation Biology* 23:557–567.
- Hall, J.A. and E. Fleishman. 2010. Demonstration as a means to translate conservation science into practice. *Conservation Biology* 24:120–127.
- Mac Nally, R., J.R. Thomson, W.J. Kimmerer, F. Feyrer, K.B. Newman, A. Sih, W.A. Bennett, L.R. Brown, E. Fleishman, S.D. Culberson, and G. Castillo. In press. An analysis of pelagic species decline in the upper San Francisco Estuary using multivariate autoregressive modelling (MAR). *Ecological Applications*.
- Sutherland, W.J., M. Clout, I.M. Côté, P. Daszak, M.H. Depledge, L. Fellman, E. Fleishman, R. Garthwaite, D.W. Gibbons, J. De Lurio, A.J. Impey, F. Lickorish, D. Lindenmayer, J. Madgwick, C. Margerison, T. Maynard, L.S. Peck, J. Pretty, S. Prior, K.H. Redford, J.P.W. Scharlemann, M. Spalding, and A.R. Watkinson. In press. A horizon scan of global conservation issues for 2010. *Trends in Ecology and Evolution*.
- Thomson, J.R., W.J. Kimmerer, L.R. Brown, K.B. Newman, R. Mac Nally, W.A. Bennett, F. Feyrer, and E. Fleishman. In press. Bayesian change-point analysis of abundance trends for pelagic fishes in the upper San Francisco Estuary. *Ecological Applications*.

### Submitted manuscripts

- Fleishman, E. Understanding species richness gradients informs projected responses to climate change. Commentary. *Journal of Biogeography*.
- Fleishman, E. and D.D. Murphy. Minimizing uncertainty in interpreting responses of butterflies to climate change. In J. Belant and E. Beever, editors. *Ecological Consequences of Climate Change: Mechanisms, Conservation, and Management*. Taylor & Francis, London.

### Technical reports

- Center for Conservation Biology. 1992. Studies of *Cordylanthus palmatus* at the Springtown Alkali Sink, Livermore, California. Submitted to the California Department of Fish and Game Endangered Plant Program. Stanford, California.

- Center for Conservation Biology. 1993. Conservation of the palmate-bracted bird's beak, *Cordylanthus palmatus*. Submitted to the California Department of Fish and Game Endangered Plant Program. Stanford, California.
- Fleishman, E. and D.D. Murphy. 1993. A review of the biology of coastal sage scrub. Sections 9.1 and 9.2 in Southern California Coastal Sage Scrub Natural Communities Conservation Plan: Scientific Review Panel Conservation Guidelines and Documentation. California Department of Fish and Game and California Resources Agency, Sacramento, California.
- Fleishman, E., A.E. Launer, K.R. Switky, and S.B. Weiss. 1994. Multi-level monitoring of the endangered plant *Cordylanthus palmatus* at the Springtown Alkali Sink. Pages 20–32 in D.M. Kent and J.J. Zentner, editors. Selected Proceedings of the 1993 Conference of the Society of Wetland Scientists, Western Chapter.
- Fleishman, E., A.E. Launer, K.R. Switky, and U. Yandell. 1996. Development of a long-term monitoring plan for the endangered plant *Cordylanthus palmatus*. Pages 45–57 in D.M. Kent, J.J. Zentner, and K.D. Whitney, editors. Selected Proceedings of the 1994 Conference of the Society of Wetland Scientists, Western Chapter.
- Fleishman, E. 1996. Applications of butterfly ecology to cooperative land management in the Great Basin. Pages 40–45 in K. Evans, editor. Sharing Common Ground on Western Rangelands: Proceedings of a Livestock/Big Game Symposium. General Technical Report. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, Utah.
- Fleishman, E. and A.D. Weiss. 1997. Modeling the response of butterflies to climate change as a conservation tool. Pages 137–141 in Proceedings of the 10th Conference on Applied Climatology. American Meteorological Society, Boston, Massachusetts.
- Fleishman, E. and R. Mac Nally. 2003. Topography may help explain faunal nestedness: a case study using Great Basin butterfly assemblages. Invited submission. Toward Best Practices Electronic Forum, National Biological Information Infrastructure. Available at <http://www.nbi.gov/datainfo/bestpractices/eforum/index.php>.
- Murphy, D.D., E. Fleishman, and P.A. Stine. 2004. Biodiversity in the Sierra Nevada. Pages 179–186 in D.D. Murphy and P.A. Stine, editors. Proceedings for the Sierra Nevada science symposium. General Technical Report PSW-GTR-193. Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, Albany, California.
- Murphy, D.D., E. Fleishman, and A. Ballard. 2005. Evaluation of distribution of elderberry and the valley elderberry longhorn beetle on GenCorp property in eastern Sacramento County, California. Submitted to the U.S. Fish and Wildlife Service, Sacramento, California.
- Fleishman, E. 2008. Great Basin rare and vulnerable species. Pages 61–64 in J.C. Chambers, N. Devoe, and A. Evenden, editors. Collaborative Management and Research in the Great Basin—Examining the Issues and Developing a Framework for Action. General Technical Report RMRS-GTR-204, USDA Forest Service, Rocky Mountain Research Station, Fort Collins, Colorado.
- Baron, J.S., C.D. Allen, E. Fleishman, L. Gunderson, D. McKenzie, L. Meyerson, J. Oropeza, and N. Stephenson. 2008. National Parks. Pages 4-1 to 4-68 in S.H. Julius and J.M. West (editors) and J.S. Baron, L.A. Joyce, B.D. Keller, M.A. Palmer, C.H. Peterson, and J.M. Scott (authors). Preliminary review of adaptation options for climate-sensitive ecosystems and resources. A report by the U.S. Climate Change Science Program and the

Subcommittee on Global Change Research. U.S. Environmental Protection Agency, Washington, D.C.

Raheem, N., J. Talberth, S. Colt, E. Fleishman, P. Swedeen, K.J. Boyle, M. Rudd, R.D. Lopez, T. O'Higgins, C. Willer, and R.M. Boumans. March 2009. The economic value of coastal ecosystems in California. Submitted to the Ocean Protection Council, Sacramento, California.

### Other publications

- Fleishman, E. 1995. A holistic view of butterflies. Review of *Swallowtail Butterflies of the Americas: A Study in Biological Dynamics, Ecological Diversity, Biosystematics, and Conservation* by H. Tyler, K.S. Brown, Jr., and K.H. Wilson. *Conservation Biology* 9:968–969.
- Fleishman, E. 1997. Mesoscale patterns in butterfly communities of the central Great Basin and their implications for conservation. Ph.D. dissertation, University of Nevada, Reno.
- Fleishman, E. 1998. A field guide to statistics. Review of *Surveying Natural Populations* by L. Hayek and M. Buzas. *Ecology* 79:355–356.
- Contributing author. Brussard, P.F., D.A. Charlet, and D.S. Dobkin. 1998. Great Basin-Mojave Desert region. Pages 505–529 in M.J. Mac, P.A. Opler, C.E. Puckett Haecker, and P.D. Doran, editors. *Status and Trends of the Nation's Biological Resources*. U.S. Department of the Interior, U.S. Geological Survey, Reston, Virginia.
- Fleishman, E. 1999. Exploring fields of opportunity: conservation biology and policy in the Great Basin. *Association for Women in Science Magazine* 28(1):8–12.
- Fleishman, E. 2000. Biogeography in theory and practice. Review of *An Introduction to Applied Biogeography* by I.F. Spellerberg and J.W.D. Sawyer. *Ecology* 81:289–290.
- Fleishman, E., C.L. Boggs, M.C. Devine, S. Kark, and T.H. Ricketts. 2000. Status of the union. Review of *Status and Trends of the Nation's Biological Resources* by M.J. Mac, P.A. Opler, C.E. Puckett Haecker, and P.D. Doran, editors. *Conservation Biology* 14:1926–1927.
- Fleishman, E. 2001. Moving scientific review beyond academia. *Conservation Biology* 15:547–549.
- Fleishman, E. 2001. Wisdom and wonder. Review of *Precious Heritage: The Status of Biodiversity in the United States* by B.A. Stein, L.S. Kutner, and J.S. Adams, editors. *Ecology* 82:2375–2376.
- Fleishman, E., D.D. Murphy, and R.B. Blair. 2001. Selecting effective umbrella species. *Conservation Biology in Practice* 2(2):17–23.
- Fleishman, E. 2002. The error of judgment: struggling for neutrality in science and journalism. *Conservation Biology* 16:1451–1453.
- Fleishman, E. 2003. Local scope, global challenge. Review of *Conservation Biology* by A. Pullin. *Journal of Biogeography* 30:1781–1782.
- Fleishman, E. 2004. Bio[statistics]philia. Review of *Experimental Design and Data Analysis for Biologists* by G.P. Quinn and M.J. Keough. *Conservation Biology* 18:286–288.
- Fleishman, E. 2005. A perspective on the role of academia in conservation biology: permeable walls in the Ivory Tower. Pages 8–9 in M.J. Groom, G.K. Meffe, and C.R. Carroll. *Principles of conservation biology*, third edition. Sinauer Associates, Sunderland, Massachusetts.

- Fleishman, E. 2006. Real solutions for false absences. Review of *Occupancy Estimation and Modeling: Inferring Patterns and Dynamics of Species Occurrence* by D.I. MacKenzie, J.D. Nichols, J.A. Royle, K.H. Pollock, L.L. Bailey, and J.E. Hines. *Ecology* 87:2135–2136.
- Fleishman, E. 2007. Review of *Evolutionary Conservation Biology* by R. Ferrière, U. Dieckmann, and D. Couvet, editors. *Bulletin of Mathematical Biology* 69:791–793.
- Fleishman, E. 2007. Retrospection and innovative conservation under the Endangered Species Act. Review of *The Endangered Species Act at Thirty. Renewing the Conservation Promise. Volume 1* by D.D. Goble, J.M. Scott, and F.W. Davis, editors. *Ecology* 88:3212–3213.
- Fleishman, E., J.C. Chambers, and M.J. Wisdom. 2009. Introduction to the special section on alternative futures for Great Basin ecosystems. *Restoration Ecology* 17:704–706.
- Fleishman, E. 2010. The task remains the same. *Conservation Biology* 24:1–3.
- Fleishman, E. In press. Distinct and collective attributes of invasion biology. Review of *Invasion Biology* by M.A. Davis. *Ecology*.

### Curricula

2004. Seto, K. and E. Fleishman. Model curriculum for remote sensing: remote sensing of the environment. Distributed by Institute for Advanced Education in Geospatial Sciences, University of Mississippi.
2005. Fleishman, E. and K. Seto. Model curriculum for remote sensing: ecosystems modeling applications. Distributed by Institute for Advanced Education in Geospatial Sciences, University of Mississippi.
2009. Fleishman, E. and K. Seto. Applications of remote sensing to ecological modeling. Distributed by Network of Conservation Educators and Practitioners, Center for Biodiversity and Conservation, American Museum of Natural History.

### Invited presentations

1991. The effect of fluorescent pigments on butterfly mating. Jasper Ridge Biological Preserve Research Seminar, Stanford, California.
1994. Fleishman, E., A.E. Launer, K.R. Switky, and U. Yandell. Development of a long-term monitoring plan for the endangered plant *Cordylanthus palmatus* Society of Wetland Scientists, Western Chapter, Berkeley, California.
1995. Biodiversity perspectives on rangeland reform. The Wilderness Society, Nevada Chapter Annual Meeting, Reno, Nevada.
1995. Butterfly and hostplant distributions in central Nevada. Northern Nevada Native Plant Society, Reno, Nevada.
1995. Environmental Perspectives (panel). The International Women's Network, University of Nevada, Reno.
1995. Brussard, P.F., E. Fleishman, and J.M. Reed. Birds versus insects as indicators of riparian health in the Great Basin. Entomological Society of America, Las Vegas, Nevada.
1996. Wildlife, Fisheries, and Rare Plants – Necessary Building Blocks to Overall Ecosystem Management (poster). U.S. Forest Service, Twin Falls, Idaho.

1997. Fleishman, E. and D.D. Murphy. The efficacy of butterflies as umbrella species for ecosystem conservation. Society for Conservation Biology, Victoria, British Columbia.
1997. Use of indicator species for conservation of species groups: montane butterflies in the Great Basin. *The Use of Population Viability Analyses in Conservation Planning*. Swedish Environmental Protection Agency, Stockholm.
1999. Fleishman, E., D.D. Murphy, and P. Sjögren-Gulve. Modeling species richness and habitat suitability for species of conservation interest. *Predicting species occurrences: issues of scale and accuracy*, Snowbird, Utah.
2000. Predicting species distributions for land-use planning. Department of Environmental Studies, University of Nevada, Las Vegas.
2000. Predicting species distributions for land-use planning. U.S. Fish and Wildlife Service, Sacramento, California.
2000. Predicting species distributions for land-use planning. Miami University, Oxford, Ohio.
2002. Predictive modeling of butterfly occurrence in the Great Basin using topographic variables. University of California, Berkeley.
2002. Predictive modeling of species occurrence using topographic variables. University of Washington.
2002. Fleishman, E., J.B. Dunham, P.F. Brussard, and D.D. Murphy. The fauna of the central Great Basin: past, present, and future. Ecological Society of America, Tuscon, Arizona.
2002. Integrating ecology and land management in the American outback. Monash University, Victoria, Australia.
2003. Murphy, D.D. and E. Fleishman. Conserving the rarest of the rare: categorization, management challenges, and tools. *Innovations in species conservation: innovative approaches to address rarity and risk*, Portland, Oregon.
2003. Mac Nally, R. and E. Fleishman. Reframing habitat quality as a species response. International Association for Landscape Ecology, Darwin, Australia.
2003. Prediction of species occurrence in managed landscapes across space and time. Natural Areas Conference, Madison, Wisconsin.
2004. Fleishman, E. and R.B. Blair. The importance of place, environment, and life history across taxonomic groups for conservation planning in urbanizing environments. Ecological Society of America, Portland, Oregon.
2004. Signal, noise, and taxonomic effects in biodiversity patterns. The Wildlife Society, Calgary, Alberta.
2004. Surrogate-based approaches for predicting species richness of multiple taxonomic groups. North Dakota State University, Fargo.
2004. Surrogate-based approaches for predicting species richness of multiple taxonomic groups. University of North Dakota, Grand Forks.
2005. Surrogate-based approaches for predicting species richness of multiple taxonomic groups. Bowling Green State University, Bowling Green, Ohio.
2005. Fleishman, E. and D.S. Dobkin. Predictive modeling of the distribution and habitat of birds in managed landscapes. USGS Forest and Rangeland Ecosystem Science Center, Snake River Field Station, Boise, Idaho.
2005. Tradeoffs among alternative predictors of species distributions. *Predictive modelling of species distributions: new tools for the 21st century*. Universidad Internacional de Andalucía, Spain.

2005. Predictive approaches to managing public and private landscapes. Colorado State University, Fort Collins.
2006. Predictive approaches to managing public and private landscapes. University of Maine, Orono.
2006. Conservation science in a polarized political world. Association of Environmental Professionals, Santa Barbara, California.
2007. Integration of science and management on public and private landscapes. Northern Arizona University.
2007. Use of surrogate measures in Habitat Conservation Plans. Inagural annual symposium of science and multispecies Habitat Conservation Plans. University of California, Riverside Palm Desert Campus, California.
2007. Integrating science with conservation and land-use planning. Endangered Species Act: regional Habitat Conservation Plans in southern California. Continuing Legal Education conference, San Diego, California.
2007. Dobkin, D.S., E. Fleishman (presenter), J. Thomson, and R. Mac Nally. Avian response to changes in structure and composition of riparian and upland land cover in the Great Basin. Ecological Society of America and Society for Ecological Restoration, San Jose, California.
2007. Fay, J.P., E. Fleishman, D.S. Dobin, and J.C. Chambers. Linking spatial data and predictive models to forecast alternative options and futures in managed landscapes. Ecological Society of America and Society for Ecological Restoration, San Jose, California.
2007. Introduction to umbrella approaches. Keynote presentation. Technical session on umbrella approaches to species and habitat management. Strategic Environmental Research and Development Program / Environmental Security Technology Certification Program (SERDP / ESTCP) Partners in Environmental Technology Symposium, Washington, D.C.
2008. New insights from old data. Interagency Ecological Program annual workshop, Pacific Grove, California.
2008. Valuing California's coastal resources and ecosystem services, Wetlands Recovery Project Symposium, San Diego, California.
2008. Philanthropic opportunities on climate change adaptation: science. Annual meeting of the Consultative Group on Biological Diversity, Tucson, Arizona.
2008. Fleishman, E., C. Stem, and N. Salafsky. Use of results chains to test assumptions about coastal conservation strategies. Symposium on integrated land-sea conservation planning: concepts and case studies. Society for Conservation Biology, Chattanooga, Tennessee.
2008. Pressey, B., E. Fleishman, R. Noss, K. Vance-Borland, and C. Willer. Towards a conceptual and technical framework for integrated conservation planning in coastal catchments and nearshore marine waters. Symposium on integrated land-sea conservation planning: concepts and case studies. Society for Conservation Biology, Chattanooga, Tennessee.
2008. Building and sustaining collaborations between climate-change researchers and conservation practitioners. Environmental Systems Research Institute User Conference, San Diego, California.
2008. Application of synthetic science to pelagic organism declines in the San Francisco Estuary. California Water Law. Continuing Legal Education conference, Pasadena, California.

2008. Application of science principles for post-recovery management of threatened and endangered species to at-risk species. Strategic Environmental Research and Development Program / Environmental Security Technology Certification Program (SERDP / ESTCP) Partners in Environmental Technology Symposium, Washington, D.C.
2009. Application of science to climate adaptation. Public Interest Environmental Law Conference, Eugene, Oregon.
2009. Application of conservation science to management of public and private lands in the western United States. Carleton University, Ottawa, Ontario, Canada.
2009. Applying principles of conservation reliance to maintain species at risk. Continuing Legal Education Conference, Palm Springs, California.
2009. Applying principles of conservation reliance to maintain species at risk. The Wildlife Society, Monterey, California.
2009. Reducing uncertainty in synthetic analyses. Bay-Delta monitoring questions and tools for the 21st century. Interagency Ecological Program Workshop, Sacramento, California.
2009. Application of conservation science to management of public and private lands in the western United States. Bren School of Environmental Science & Management, University of California, Santa Barbara.

#### **Contributed presentations**

1993. Fleishman, E., A.E. Launer, and K.R. Switky. Monitoring of *Cordylanthus palmatus* at the Springtown Alkali Sink, Livermore, California. Society of Wetland Scientists, Western Chapter, Davis, California.
1994. Austin, G.T., E. Fleishman, A.E. Launer, and D.D. Murphy. Distribution and status of the western seep fritillary, *Speyeria nokomis apacheana*. Society of Wetland Scientists, Western Chapter, Berkeley, California.
1995. Fleishman, E. and P.F. Brussard. Identification of nestedness and indicator assemblages in butterfly and bird faunas of the Great Basin. Society for Conservation Biology, Fort Collins, Colorado.
1996. Applications of butterfly ecology to cooperative land management in the Great Basin (poster). Symposium on Livestock / Big Game Management on Western Rangelands, Sparks, Nevada.
1996. Elevational gradients in a montane butterfly community. Joint meeting of the Society for Conservation Biology and Ecological Society of America, Providence, Rhode Island.
1997. Fleishman, E. and A.D. Weiss. Modeling the response of butterflies to climate change as a conservation tool. American Meteorological Society Conference on Applied Climatology, Reno, Nevada.
1998. Fleishman, E., D.D. Murphy, and P.F. Brussard. Assessment of spatial and temporal butterfly inventory strategies for conservation plans. Society for Conservation Biology, Sydney, Australia.
1998. Fleishman, E., D.D. Murphy, and P.F. Brussard. Pitfall or panacea? Assessing butterflies as tools for land management (poster). Third International Butterfly Ecology and Evolution Symposium, Mt. Crested Butte, Colorado.

1999. Fleishman, E., P. Sjögren-Gulve, and C. Ray. Metapopulation dynamics and conservation of the Apache silverspot butterfly. Society for Conservation Biology, College Park, Maryland.
2000. Fleishman, E. and R. Mac Nally. Analytic and predictive models of butterfly species richness and occurrence. Society for Conservation Biology, Missoula, Montana.
2001. Fleishman, E. and R.B. Blair. Empirical validation of a new method for umbrella species selection. Society for Conservation Biology, Hilo, Hawaii.
2002. Fleishman, E. and R. Mac Nally. Validation tests of predictive models of butterfly occurrence. Society for Conservation Biology, Canterbury, England.
2003. Fleishman, E. and R. Mac Nally. A successful predictive model of species richness using indicator species. Society for Conservation Biology, Duluth, Minnesota.
2003. Blair, R.B. and E. Fleishman. Selecting effective umbrella species for protection and management: the umbrella species index. Natural Areas Conference, Madison, Wisconsin.
2004. Fleishman, E., R. Mac Nally, and D.D. Murphy. Influence of scale of sampling on detection of relationships between invasive plants and diversity patterns of plants and butterflies. Society for Conservation Biology, New York, New York.
2004. Thomson, J.R., R. Mac Nally, and E. Fleishman. “Evolving” distributional models for birds and butterflies. Ecological Society of Australia, Adelaide.
2005. Ayres, D., E. Fleishman, D. Zippin, and A. Lee. 2005. Genetic structure of the endangered plant *Cordylanthus palmatus*, the palmate-bracked bird’s beak, within vernal pool complexes and other seasonal alkali wetlands (poster). Society of Wetland Scientists, Western Chapter, Santa Rosa, California.
2005. Fleishman, E., J.R. Thomson, and R. Mac Nally. Surrogate-based approaches for predicting species richness of multiple taxonomic groups. Society for Conservation Biology, Brasília, Brazil.
2005. Thomson, J.R., R. Mac Nally, G. Horrocks, and E. Fleishman. Modelling bird species distributions to contribute to revegetation planning. Ecological Society of Australia, Brisbane.
2006. Thomson, J.R., R. Mac Nally, E. Fleishman, and G. Horrocks. Modelling bird species distributions to inform landscape planning for biodiversity management. Society for Conservation Biology, San Jose, California.
2006. Chambers, J., R. Tausch, E. Fleishman, R. Blank, D. Johnson, P. Weisberg, D.S. Dobkin, B. Noon, B. Dickson, B. Bradley, M. Amacher, D. Germanoski, and S. Williams. A demonstration area on ecosystem response to watershed-scale burns in Great Basin pinyon–juniper woodlands (poster). 2006 Workshop on Collaborative Watershed Management and Research in the Great Basin, Reno, Nevada.
2008. DellaSala, D., M. Koopman, C. Deacon Williams, E. Fleishman, B. Doppelt, and R. Hamilton. Preparing ecosystems for climate change using a conservation and adaptation framework. Society for Conservation Biology, Chattanooga, Tennessee.

### Teaching experience

- Teaching assistant, Plant and Population Biology, Stanford University, 1993  
Teaching assistant, Evolution, University of Nevada, Reno, 1995  
Teaching assistant, Conservation Biology, Stanford University, 1999

Seminar leader, Biocomplexity and Ecoinformatics (graduate research training course sponsored by the National Center for Ecological Analysis and Synthesis), Stanford University, 2002  
Instructor, Conservation Science and Policy (graduate seminar), University of California, Santa Barbara, 2008

### Students supervised

Chris Betrus, Master of Science student (advised by Robert Blair), Miami University, 2001  
Lesley Penfield, Master of Science student (advised by Robert Blair), Miami University, 2002  
Jérôme Pellet, Postdoctoral Fellow, Stanford University, 2005–2006  
Bernardo Broitman, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2006–2008  
Carrie Kappel, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2006–2009  
Tom O'Halloran, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2007–2008  
Luis Francisco Madriñán, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2008–2009  
Christine Petersen, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2008–  
Alisa Wade, Postdoctoral Associate, National Center for Ecological Analysis and Synthesis, 2009–

### Personal grants and awards

1991 Undergraduate Research Opportunities grant, Stanford University. \$500.  
1991 Mellon Foundation / Stanford University grant program for Jasper Ridge research. \$350.  
1995 Graduate Student Association Scholarship, University of Nevada, Reno. \$400.  
1996 Jerry and Betty Wilson Scholarship, Department of Biology, University of Nevada, Reno. \$4000.  
1997 First place, Graduate Student Association science paper competition, University of Nevada, Reno.  
1997 – 1999 Meadow Canyon butterfly monitoring project. Challenge cost-share agreement between the University of Nevada, Reno and the Humboldt-Toiyabe National Forest, U.S. Department of Agriculture—Forest Service. \$25,200.  
1998 Society for Conservation Biology / National Science Foundation travel award  
1998 – 2001 Apache silverspot butterfly monitoring and management. Challenge cost-share agreement between the University of Nevada, Reno and the Humboldt-Toiyabe National Forest, U.S. Department of Agriculture—Forest Service. \$10,500.  
2000 – 2003 Chambers, J.C., R.J. Tausch, M.C. Amacher, D. Germanoski, E. Fleishman, and D. Zamudio. A demonstration area on ecosystem response to watershed-scale burns in Great Basin pinyon-juniper woodlands. Joint Fire Science Program (JFSP # 00-2-15). \$99,027.  
2001 Special recognition for volunteer service, Society for Conservation Biology  
2001, 2002 Long Distance All-American, United States Masters Swimming

- 2001 – 2002 Ecology and conservation of butterflies on the Humboldt-Toiyabe National Forest. U.S. Department of Agriculture—Forest Service. \$2496.
- 2001 – 2004 Chambers, J.C., R.J. Tausch, R.R. Blank, and E. Fleishman. Effects of fire and rehabilitation seeding on sage grouse habitat in the pinyon-juniper zone (an extension of the Great Basin pinyon-juniper demonstration area). Joint Fire Science Program (JFSP # 01B-3-3-01). \$137,521.
- 2002 – 2004 Seto, K. and E. Fleishman. Model curriculum for remote sensing: remote sensing of the environment. Center for GeoSpatial Workforce Development, University of Mississippi. \$80,000.
- 2003 – 2004 Fleishman, E. and K. Seto. Model curriculum for remote sensing: ecosystems modeling applications. Institute for Advanced Education in Geospatial Sciences, University of Mississippi. \$80,000.
- 2003 – 2005 Mac Nally, R. and E. Fleishman. Reconstructing landscapes for biodiversity: from predictive modelling to future scenarios. Australian Research Council (Grant No. DP0343898). AU\$300,000.
- 2003 – 2006 Ayres, D., E. Fleishman, A. Launer, and D. Zippin. Genetic analysis of *Cordylanthus palmatus* populations. California Department of Fish and Game and U.S. Fish and Wildlife Service. \$53,828.
- 2005 – 2006 Dobkin, D.S., E. Fleishman, and R. Mac Nally. Response of sagebrush-dependent birds and their habitats to management-prescribed fire and to wildfire regimes. National Fish and Wildlife Foundation (#2005-0294-000). \$77,525.
- 2005 – 2009 Fleishman, E., J. Chambers, D.S. Dobkin, B. Noon, and K. Seto. Response of birds, butterflies, and their habitats to management of wildland fuels and fire regimes. Joint Fire Science Program (JFSP # 05-2-1-94). \$252,773.
- 2006 Salafsky, N. and E. Fleishman. Foundation support for conservation science. Consultative Group on Biological Diversity. \$25,000.
- 2007 Analysis and conservation prioritization of landscape connectivity in Nevada. Wilburforce Foundation. \$100,000.
- 2007 Making a Difference award, Environmental Systems Research Institute, Inc. (ESRI). In recognition of development of partnerships between the Society for Conservation GIS, Society for Conservation Biology, and ESRI to build international conservation capacity through improved integration of technology and science.
- 2009 – 2010 Determining priorities for conservation science and policy in the face of climate change. Kresge Foundation. \$176,073.
- 2009 – 2011 Mac Nally, R. and E. Fleishman. Change ecology – gaining broadscale, timely biodiversity knowledge in a time of uncertainty. Australian Research Council (Grant No. DP0984170). AU\$440,000.
- 2009 – 2011 Maintaining connectivity in the Great Basin in the face of climate and land-cover change. Wilburforce Foundation. \$50,000.
- 2009 – 2011 Population consequences of acoustic disturbance of marine mammals. Office of Naval Research. \$204,147.
- 2009 – 2012 Fleishman, E., J.C. Chambers, D.S. Dobkin, and B.G. Dickson. Decision support tools for conserving Greater Sage-grouse during fire and fuels management projects in pinyon and juniper woodlands. Joint Fire Science Program. \$300,464.
- 2009 – 2010 Integrating conservation science for the coastal temperate rainforests (Tongass

and Great Bear). Wilburforce Foundation. \$45,000.  
2009 – 2011 Cumulative effects of anthropogenic sound on marine mammals. BP Exploration.  
(submitted) \$266,000.

### **Organizational grants and awards**

#### *Support for the 2006 annual meeting of the Society for Conservation Biology*

The David and Lucile Packard Foundation, \$100,000  
The Christensen Fund, \$72,500  
Gordon and Betty Moore Foundation, \$40,000  
Blackwell Publishing, \$15,000  
Wilburforce Foundation, \$12,500  
U.S. Fish and Wildlife Service, \$12,500  
California Department of Fish and Game, \$10,000  
Ford Foundation, \$10,000  
U.S. Geological Survey, \$7500  
California State Parks, \$5000  
The Irvine Company, \$5000  
Jones & Stokes, \$2500  
Woods Institute for the Environment, Stanford University, \$2500  
Pacific Gas & Electric Company, \$2500  
University of Chile, \$1000  
Red Latinoamericana de Botanica, \$1000  
Centro Internacional de Ecologia Tropical, \$1000  
Zoological Society of San Diego, \$1000  
EcoSystems Restoration Associates, \$1000  
University of California, Berkeley, \$750  
Santa Clara Valley Water District, \$500  
Environmental Science Associates, \$500  
The Nature Conservancy, \$500  
Oregon State University, \$250

#### *Support for the National Center for Ecological Analysis and Synthesis*

2006 – 2007 Response of Pacific salmon to climate change. Gordon and Betty Moore  
Foundation. \$85,826.  
2006 – 2007 New tools for incorporating landscape and population connectivity into  
conservation planning. Wilburforce Foundation. \$25,000.  
2007 Linking regional initiatives for ecosystem-based management. David and Lucile  
Packard Foundation. Awarded to Wildlife Conservation Society and NCEAS.  
\$172,673 (\$103,673 to NCEAS).  
2007 – 2008 Linking regional initiatives for ecosystem-based management. David and Lucile  
Packard Foundation. Awarded to Wildlife Conservation Society and NCEAS.  
\$150,000 (\$73,200 to NCEAS).  
2007 – 2009 Climate change synthesis for conservation action. Marisla, Kendall, Surdna, and

- Wilburforce foundations. Awarded to Wildlife Conservation Society and NCEAS. \$150,000 (\$17,000 to NCEAS).
- 2007 – 2009 Valuation of ecosystem services provided by coastal marine resources in California. California Coastal Conservancy. \$78,738.
- 2007 – 2010 Declines of pelagic organisms in the upper San Francisco Estuary, California. USDI Fish and Wildlife Service. \$1,234,973.
- 2007 – 2010 Prediction of responses of wild Pacific salmon to climate change. Gordon and Betty Moore Foundation. \$1,260,807.
- 2008 – 2009 A risk assessment workshop for climate change and forest pathogens in western North America. USDA Forest Service. \$13,295.
- 2008 – 2010 Development and application of scientific knowledge to ecosystem-based management of coastal marine systems. David and Lucile Packard Foundation. \$1,150,000.
- 2009 – 2011 Applying population ecology to strategies for eradicating invasive forest insects. USDA Forest Service. \$73,751.